

**Annual Report on Affordability Findings of Compliance to the Missouri Clean Water Law  
Calendar Year 2018**

**Prepared by Missouri Department of Natural Resources  
Water Protection Program**

The General Assembly enacted Section 644.145 of the Revised Statutes of Missouri (RSMo) in 2011 to ensure that the Department of Natural Resources considers affordability when incorporating new requirements into permits for publicly owned sewer systems, water or sewer treatment works, or when enforcing provisions of Chapter 644 or the Federal Water Pollution Control Act. This report presents affordability findings for Department permits issued or anticipated during calendar year 2018.

Based on criteria described in this statute, affordability is defined as “a measure of whether an individual customer or household with an income equal to or lower than the median household income for their community can pay the bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household.”

**Number of Findings of Affordability**

The Department issued 136 findings of affordability with effective dates in calendar year 2018. All 136 findings were categorized as affordable. None of the changes were implemented as a federal mandate. Whenever the risk of an unaffordable action is high, the Department works with permittees before issuing any final permit to mitigate changes where possible and avoid creating an unaffordable situation. These mitigation efforts can include temporary variances, revised compliance schedules, and the reevaluation of financing options.

**Findings Resulting in Higher Than Normal Median Household Income**

Missouri’s statute established a specific threshold for affordability relative to median household income (MHI), although MHI is commonly regarded as an indicator of potential affordability concerns. Of the 136 actions requiring affordability findings in 2018, nine actions resulted in projected monthly sewer rates per user greater than 2% of MHI. Of those nine actions, three were minor, resulting in monthly increases of \$0.20 or less. Following are summaries for the remaining six permit actions:

- The City of Berger’s permit action requires compliance with effluent limitations for bacteria and whole effluent toxicity testing, which resulted in an estimated \$13.83 increase in the projected monthly sewer rate from \$44.65 to \$58.48 (per 5,000 gallons per month). The existing sewer rate of \$44.65 was already 2.0% of the community’s MHI. The requirements would increase sewer rates by 0.62% to 2.62% of MHI. Therefore the Department included a 10-year schedule of compliance to comply with effluent limits for bacteria. The Department will review the cost for compliance at the next 5-year permit renewal.
- The City of Bosworth’s permit action requires compliance with effluent limitations for bacteria, which resulted in an estimated \$6.33 increase in the projected monthly sewer rate from \$50.78 to \$57.11 (per 5,000 gallons per month). The existing sewer rate of \$50.78 is 1.81% of the community’s MHI. The requirements are projected to increase the sewer rates by 0.22% to 2.03% of MHI. The city currently does not discharge during the months of April to October, when *E.*

*coli* limits are applicable. If the city can continue to operate the lagoon in this manner the city will not have to install disinfection treatment to comply with bacteria permit limits. Therefore, the Department established a 10 year schedule of compliance in the permit and will reevaluate it at the next 5-year permit renewal.

- The City of Clarence's permit action requires compliance with effluent limitations for bacteria, which resulted in an estimated \$5.93 increase in the projected monthly sewer rate from \$49.60 to \$55.53 (per 5,000 gallons per month). The existing sewer rate of \$49.60 is 1.68% of the community's MHI. The requirements are projected to increase sewer rates by 0.45% to 2.13% of MHI. Therefore, the Department established a 10 year schedule of compliance in the permit and will reevaluate it at the next 5-year permit renewal.
- The City of Downing's permit action requires compliance with effluent limitations for ammonia which was reassessed as part of this renewal. This resulted in an estimated \$16.75 increase in the projected monthly sewer rate from \$31.00 to \$47.75 (per 5,000 gallons per month), thus raising the projected sewer rate to 2.08% of the MHI. Prior to the city's operating permit renewal, the city had a six year schedule of compliance to meet final limits for ammonia. The recent affordability analysis determined that the community may endure a high financial burden for this upgrade. Therefore, the Department added six years to the original schedule, to comply by June 30, 2025. This date is significant because the city reported an outstanding debt for their current collection and treatment system of \$129,403 (at time of renewal), but that the debt will be fully repaid in 2023. The city indicated that each user pays \$31.00 each month, and \$17.36 of that payment is dedicated to debt repayment. Once this debt is retired, it appears that the estimated cost of the upgrade would put user rates in the range of 1.4% to 1.9% of MHI.
- The City of Wheeling's permit action requires compliance with effluent limitations for ammonia and bacteria. This resulted in an estimated \$37.24 increase in the projected monthly sewer rate from \$25.00 to \$62.24 (per 5,000 gallons per month), thus raising the projected monthly sewer rate to 2.26% of the monthly MHI. This facility's previous permit was issued in 2013, and included a five-year schedule of compliance to meet effluent limits for ammonia. Upon review of the current permit action, the Department has extended the schedule of compliance for ammonia and bacteria by ten years.

### **Findings Resulting in Projected Increase of Monthly Sewer Rate per User of 100% or Higher**

Missouri's statute established the Department shall make a finding of affordability on the cost to be incurred and the impact of any rate changes on ratepayers upon which to base such permit actions. Of the 136 actions requiring affordability findings in 2018, five resulted in a projected increase of monthly sewer rate of 100% or higher. In all cases, the MHI for each of the five municipalities was less than 2%. For the purpose of the analysis, the Department assumes that this will require a system modification or replacement. However, the Department will work with each city to determine if there are lower cost alternatives and is working with the cities to secure grants and low-interest loans wherever possible.

- The City of Risco must meet effluent limits for ammonia. The Department estimates the cost of a replacement system will increase the Monthly Sewer Rate per User by \$39.00 from \$21.00 to \$60.00, which is a 185.7% increase and projected MHI of 1.48% for the community.



- The City of Rockville must meet effluent limits for ammonia and E. coli. The analysis examined mechanical treatment and land application, with land application being more affordable option. The Department estimates the cost for land application to meet new ammonia and E. coli limits will increase Monthly Sewer Rates per User by \$24.68 from \$14.00 to \$38.68, which is a 176.3% increase and projected MHI of 1.39% for the community.
- Marion County PWSD #1 must meet effluent limits for ammonia and E. coli. The analysis examined mechanical treatment and land application, with land application being the more affordable option. The Department estimates the cost for land application to meet new ammonia and E. coli limits will increase Monthly Sewer Rates per User by \$28.90 from \$12.85 to \$41.75, which is a 224.9% increase and projected MHI of 1.22% for the community.
- The City of Houstonia must meet effluent limits for ammonia and E. coli. The analysis examined mechanical treatment and land application, with land application being the more affordable option. The Department estimates the cost for land application to meet new ammonia and E. coli limits will increase Monthly Sewer Rates per User by \$15.69 from \$14.00 to \$39.69, which is a 112.1% increase and projected MHI of 0.98% for the community.
- The City of Corder operates two separate single cell lagoons, one to the north of town and one to the south of town. The City of Corder must meet effluent limits for ammonia and E. coli at both facilities. The analysis examined mechanical treatment and land application for both lagoons, with land application being the more affordable option. The Department estimates the cost for land application to meet new ammonia and E. coli limits will increase Monthly Sewer Rates per User by \$5.07 from \$4.00 to \$9.07, which is a 126.8% increase and projected MHI of 0.27% for the community.

#### **Average Increase in Sewer Rates**

For the 136 findings, the projected increases in monthly sewer rates in terms of 2017 dollar values ranged between \$0.00 and \$39.00, with an average of \$11.45. The projected percent increases in monthly sewer rates ranged between 0.0% and 224.9%, with an average of 36.6%.

#### **Average Increase in Sewer Rates as Percentages of MHI**

For the 136 findings, the projected increases in monthly sewer rates, calculated as percentages of the respective communities' monthly MHI, ranged between 0.000% and 1.350%, with an average of 0.304%. The communities included counties, cities, villages, towns, and census-designated places in which the service users were residing.

#### **List of All the Permit Holders Receiving Affordability Findings**

All permit holders that received findings in 2018 are provided in Table 1 along with data, including the following items required by statute:

- a) Current and projected monthly residential sewer rates in dollars;
- b) Projected monthly residential sewer rates as percentages of monthly median household incomes; and,
- c) Percentages of households at or below the state poverty rate.

All footnotes within Table 1 are denoted by an asterisk and a number (e.g., “\*1” through “\*18”) and corresponding elaborations are presented at the end of Table 1.



**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018**

(This table is arranged in descending order of the values for the indicator “projected monthly sewer rate per user as a percentage of monthly MHI of the respective community” as presented in the column with the highlighted heading of “Projected Monthly Sewer Rate Per User: % of Monthly MHI.”)

RSMo 644.145.9 Criteria															
														Federal Mandate	
														0	
														Not Affordable	
														0	
														Average	
														*1	
														Average	
														*2	
														Average	
														*3	
														Affordable	
														136	
No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User				House-holds at or Below Poverty	Affordability *8
								\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
001	MO-0134732	Berger WWTF	UD	\$26,894	93	\$9,591	\$44.65	\$58.48	2.61%	\$13.83	31.0%	0.617%	*16	23.8%	Yes
002	MO-0099171	Edina WWTF	S	\$28,554	546	\$776	\$58.00	\$58.12	2.44%	\$0.12	0.2%	0.005%	*16	31.7%	Yes
003	MO-0097608	Wheeling WWTF	UL	\$33,092	108	\$9,422	\$25.00	\$62.24	2.26%	\$37.24	149.0%	1.350%	*16	26.9%	Yes
004	MO-0033502	Bethany WWTF	S	\$37,451	1,481	\$292	\$70.40	\$70.42	2.26%	\$0.02	0.0%	0.001%	*16	18.1%	Yes
005	MO-0041076	Clarence WWTF	UD	\$31,329	340	\$35,744	\$49.60	\$55.53	2.13%	\$5.93	12.0%	0.227%	*16	30.5%	Yes
006	MO-0109240	Downing WWTF	UL	\$27,524	196	\$15,435	\$31.00	\$47.75	2.08%	\$16.75	54.0%	0.730%	*16	26.6%	Yes
007	MO-0135607	Bosworth WWTF	UD	\$33,677	112	\$12,084	\$50.78	\$57.11	2.03%	\$6.33	12.5%	0.226%	*16	11.9%	Yes
008	MO-0027570	Gainesville WWTF	S	\$19,592	347	\$844	\$32.50	\$32.70	2.00%	\$0.20	0.6%	0.012%	*16	35.6%	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
009	MO-0031658	Golden WWTF	S	\$29,705	291	\$388	\$48.25	\$48.36	1.95%	\$0.11	0.2%	0.004%		31.3%	Yes
010	MO-0091642	Greentop WWTF	UL	\$41,512	200	\$21,156	\$42.81	\$62.97	1.82%	\$20.16	47.1%	0.583%		16.7%	Yes
011	MO-0043231	Stanberry WWTP	UM	\$41.637	511	\$56,353	\$47.50	\$62.78	1.81%	\$15.28	32.2%	0.440%		14.8%	Yes
012	MO-0032557	Brunswick WWTF	S	\$30,030	380	\$388	\$45.00	\$45.09	1.80%	\$0.09	0.2%	0.003%		20.5%	Yes
013	MO-0043362	FCPWS #3, Red Barn WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
014	MO-0089656	FCPWS #3, Victoria Garden WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
015	MO-0105589	FCPWS #3, Woodbridge Farms WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
016	MO-0106534	FCPWS #3, Ad Deum Subdivision WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
017	MO-0108251	FCPWS #3, Golden Pond WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
018	MO-0111554	FCPWS #3, Pine Lake Estates WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
019	MO-0111937	FCPWS #3, Little Fox Creek WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
020	MO-0112275	FCPWS #3, Lakewood MHP WWTF	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			House- holds at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
021	MO-0113395	FCPWSD #3, St. Albans WWTF	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
022	MO-0114987	FCPWSD #3, Charing Cross WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
023	MO-0119113	FCPWSD #3, Twin View WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
024	MO-0123145	FCPWSD #3, Martin's Field WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
025	MO-0126691	FCPWSD #3, Ming Estates WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
026	MO-0132802	FCPWSD #3, Horseshoe Valley WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
027	MO-0133248	FCPWSD #3, Rainbow Lake Estates WWTF	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
028	MO-0133621	FCPWSD #3, Lake Wood Estates WWTP	UM	\$51,741	1,345	\$161,535	\$43.07	\$77.03	1.79%	\$33.96	78.8%	0.788%		12.0%	Yes
029	MO-0106593	FCPWSD #1, Evergreen Terrace WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
030	MO-0112828	FCPWSD #1, Emerald WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
031	MO-0114189	FCPWSD #1, Twin Lakes WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes



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No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
032	MO-0121894	FCPWSO #1, Cardinal Meadows Subdivision WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
033	MO-0125539	FCPWSO #1, Cobblestone Creek Estates WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
034	MO-0126241	FCPWSO #1, Krakow Area Lagoon	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
035	MO-0131431	FCPWSO #1, Baucky View Subdivision WWTF	UM	\$48,892	544	\$61,320	\$40.46	\$72.26	1.77%	\$31.80	78.6%	0.780%		11.9%	Yes
036	MO-0126951	Monroe County PWSD #2, Holliday WWTF	S	\$30,885	69	\$212	\$45.00	\$45.26	1.76%	\$0.26	0.6%	0.010%		14.7%	Yes
037	MO-0096318	Carrollton WWTP	S	\$31,250	1,684	\$310	\$45.50	\$45.52	1.75%	\$0.02	0.0%	0.001%		23.0%	Yes
038	MO-0021105	Appleton WWTF	S	\$34,438	491	\$32,825	\$44.06	\$49.63	1.73%	\$5.57	12.6%	0.194%		27.1%	Yes
039	MO-0057444	Steele WWTF	UM	\$30,188	822	\$61,264	\$32.30	\$42.23	1.68%	\$9.93	30.7%	0.395%		31.4%	Yes
040	MO-0114235	JCPSD, Granada Meadows WWTP	S	\$49,537	19	\$228	\$67.00	\$68.00	1.65%	\$1.00	1.5%	0.024%		14.0%	Yes
041	MO-0038792	BCRSD, Rollingwood Plat 1 WWTP	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes
042	MO-0053376	BCRSD, Highfield Acres WWTF	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. #4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
043	MO-0102113	BCRSD, Lee Heights WWTF	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes
044	MO-0115185	BCRSD, Richardson Acres WWTF	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes
045	MO-0117323	BCRSD, Oberlin Valley WWTP	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes
046	MO-0135305	BCRSD, Brown Station WWTP	UC	\$51,658	6,908	\$903,981	\$60.95	\$69.91	1.62%	\$8.96	14.7%	0.208%		19.3%	Yes
047	MO-0057908	Holden Municipal WWTF	S	\$36,153	1,004	\$388	\$48.19	\$48.22	1.60%	\$0.03	0.1%	0.001%		17.6%	Yes
048	MO-0023159	Marionville WWTF	S	\$33,418	890	\$388.00	\$43.50	\$43.54	1.56%	\$0.04	0.1%	0.001%		24.3%	Yes
049	MO-0120634	Wentworth WWTP	UL	\$42,995	55	\$4,822	\$33.00	\$54.68	1.53%	\$21.68	65.7%	0.605%		4.3%	Yes
050	MO-0131962	Lake Lotawana CID Sewer Plant #1	S	\$91,721	55	\$776	\$114.97	\$116.15	1.52%	\$1.18	1.0%	0.015%		3.9%	Yes
051	MO-0028843	Excelsior Springs WWTF	S	\$49,330	3,285	\$2,698	\$61.46	\$61.53	1.50%	\$0.07	0.1%	0.002%		15.9%	Yes
052	MO-0102083	High Hill WWTF	UL	\$40,340	89	\$6,671	\$25.20	\$49.75	1.48%	\$24.55	97.4%	0.730%		19.4%	Yes
053	MO-0025852	Risco Municipal WWTF	UM	\$48,792	157	\$12,717	\$21.00	\$60.00	1.48%	\$39.00	185.7%	0.959%	*18	5.0%	Yes
054	MO-0116581	Mindenmines WWTF	UL	\$27,957	125	\$8,396	\$33.00	\$34.17	1.47%	\$1.17	3.5%	0.050%		32.8%	Yes
055	MO-0093785	Queen WWTF	UL	\$29,152	286	\$0	\$42.00	\$35.42	1.73%	\$0.00	0.0%	0.000%	*15	23.5%	Yes
056	MO-0126292	Butterfield WWTF	UL	\$47,230	158	\$0	\$57.00	\$34.99	1.45%	\$0.00	0.0%	0.000%	*15	19.8%	Yes
057	MO-0130591	Sunny Slope Country Club Drive Sewer District WWTF	S	\$45,197	286	\$388	\$54.00	\$54.11	1.44%	\$0.11	0.2%	0.003%		17.3%	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			House- holds at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
058	MO-0130133	Pickering WWTF	UL	\$36,418	93	0\$	\$105.00	\$43.29	1.43%	\$0.00	0.0%	0.000%	*17	9.9%	Yes
059	MO-0095222	BCRSD, Rocheport WWTP	S	\$51,658	6,908	\$225	\$60.95	\$60.95	1.42%	\$0.00	0.0%	0.000%		19.3%	Yes
060	MO-0103748	Rockville WWTF	UL	\$33,358	89	\$4,689	\$14.00	\$38.68	1.39%	\$24.68	176.3%	0.888%	*18	31.8%	Yes
061	MO-0119750	Humphreys WWTF	UD	\$32,001	33	*11	*11	\$37.07	1.39%	*11	*11	*11	*11	13.0%	Yes
062	MO-0125636	Parnell Lagoons	UD	\$34,793	67	\$4,963	\$34.00	\$40.08	1.38%	\$6.08	17.9%	0.210%		20.4%	Yes
063	MO-0112135	Green City WWTF	UL	\$31,770	324	\$21,543	\$30.50	\$35.99	1.36%	\$5.49	18.0%	0.207%		19.0%	Yes
064	MO-0102709	Hale WWTF	UD	\$34,163	184	\$12,935	\$31.80	\$38.50	1.35%	\$6.70	21.1%	0.235%		21.4%	Yes
065	MO-0093513	Hannibal WWTP	S	\$36,616	7,549	\$3,366	\$41.10	\$41.14	1.35%	\$0.04	0.1%	0.001%		22.3%	Yes
066	MO-0056278	City of Canton WWTF	S	\$38,229	994	\$388	\$40.10	\$40.13	1.26%	\$0.03	0.1%	0.001%		17.3%	Yes
067	MO-0044202	Jasper WWTF	UM	\$33,437	398	\$0	\$35.00	\$32.99	1.26%	\$0.00	0.0%	0.000%	*15	23.4%	Yes
068	MO-0045811	Baring Area Wastewater System	UD	\$36,429	152	\$11,035	\$35.00	\$37.60	1.24%	\$2.60	7.4%	0.086%		11.2%	Yes
069	MO-0091146	Chula WWTF	UL	\$38,239	89	\$6,554	\$34.50	\$39.14	1.23%	\$4.64	13.4%	0.146%		15.4%	Yes
070	MO-0109622	Marion County PWSD #1 WWTF	UL	\$41,161	83	\$4,532	\$12.85	\$41.75	1.22%	\$28.90	224.9%	0.843%	*18	18.3%	Yes
071	MO-0096920	Madison WWTF	UD	\$32,484	320	\$18,608	\$26.00	\$32.15	1.19%	\$6.15	23.7%	0.227%		16.6%	Yes
072	MO-0106275	Mokane WWTF	UL	\$27,103	115	\$5,874	\$25.00	\$26.08	1.15%	\$1.08	4.3%	0.048%		26.9%	Yes
073	MO-0085910	Bucklin West WWTF	UD	\$38,817	51	\$3,243	\$26.40	\$37.18	1.15%	\$10.78	40.8%	0.333%		23.0%	Yes
074	MO-0127566	Potosi WWTF #3	S	\$27,256	320	\$388	\$25.30	\$25.40	1.12%	\$0.10	0.4%	0.004%		30.5%	Yes
075	MO-0120111	Syracuse WWTF	UL	\$30,675	87	\$3,744	\$15.49	\$27.55	1.08%	\$12.06	77.9%	0.472%		21.3%	Yes
076	MO-0108995	Hartsburg WWTF	UL	\$39,871	55	\$3,609	\$30.00	\$35.61	1.07%	\$5.61	18.7%	0.169%		12.6%	Yes
077	MO-0039900	Parma WWTF	S	\$26,521	276	\$388	\$23.32	\$23.44	1.06%	\$0.12	0.5%	0.005%		35.8%	Yes



**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability *8	
								\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
078	MO-0023108	Higginsville South Lagoon	S	\$48,748	1,897	\$1,200	\$42.50	\$42.55	1.05%	\$0.05	0.1%	0.001%		18.4%	Yes
079	MO-0023094	Higginsville I-70 North Lagoon	UL	\$48,748	1,897	\$0	\$42.50	\$35.56	1.05%	\$0.00	0.0%	0.000%	*15	18.4%	Yes
080	MO-0111848	Higginsville I-70 South WWTF	UL	\$48,748	1,897	\$0	\$42.50	\$35.56	1.05%	\$0.00	0.0%	0.000%	*15	18.4%	Yes
081	MO-0085928	Bucklin East WWTF	UD	\$38,817	158	\$9,496	\$26.40	\$33.70	1.04%	\$7.30	27.7%	0.226%		23.0%	Yes
082	MO-0103322	Green Castle WWTF	UL	\$31,011	126	\$5,765	\$19.00	\$26.75	1.04%	\$7.75	40.8%	0.300%		7.6%	Yes
083	MO-0058475	Houstonia Lagoon	UL	\$36,217	104	\$4,544	\$14.00	\$29.69	0.98%	\$15.69	112.1%	0.520%	*18	21.2%	Yes
084	MO-0099155	Pierce WWTF	S	\$41,300	473	\$551	\$33.00	\$33.10	0.96%	\$0.10	0.3%	0.003%		15.3%	Yes
085	MO-0099431	Potosi WWTF #1	S	\$31,770	1,191	\$776	\$25.22	\$25.27	0.95%	\$0.05	0.2%	0.002%		23.3%	Yes
086	MO-0028657	Sarcoxie WWTF	UL	\$42,889	533	\$27,940	\$18.68	\$33.74	0.94%	\$15.06	80.6%	0.421%		17.5%	Yes
087	MO-0104299	Cameron WWTP	UD	\$42,098	2,830	\$166,008	\$26.31	\$32.35	0.92%	\$6.04	23.0%	0.172%		19.2%	Yes
088	MO-0130281	Allendale WWTF	UD	\$56,096	33	\$2,526	\$35.00	\$41.54	0.89%	\$6.54	18.7%	0.140%		18.6%	Yes
089	MO-0130087	CGCRCSD, Saddlebrooke Ridge WWTF	S	\$49,264	50	\$228	\$35.00	\$35.38	0.86%	\$0.38	1.1%	0.009%		17.7%	Yes
090	MO-0132004	CGCRCSD, Oak Creek Estates WWTF	S	\$49,264	83	\$228	\$35.00	\$35.23	0.86%	\$0.23	0.7%	0.006%		17.7%	Yes
091	MO-0131334	CGCRCSD, Twin Oaks WWTF	S	\$49,264	99	\$228	\$35.00	\$35.19	0.86%	\$0.19	0.5%	0.005%		17.7%	Yes
092	MO-0023132	Thayer WWTF	S	\$27,417	903	\$776	\$19.50	\$19.57	0.86%	\$0.07	0.4%	0.003%		27.3%	Yes
093	MO-0121321	Bonne Terre Northeast WWTF	S	\$48,238	6,878	\$388.00	\$33.41	\$33.41	0.83%	\$0.00	0.0%	0.000%		10.8%	Yes
094	MO-0025844	Kingsville WWTF	UD	\$40,340	121	\$5,452	\$17.97	\$27.09	0.81%	\$9.12	50.8%	0.271%		11.2%	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. #4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User			Projected Monthly Sewer Rate Per User			Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability *8
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7	\$	%	% of Monthly MHI *7		
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]					
095	MO-0040835	Crane WWTF	S	\$30,912	730	\$2,254	\$20.49	\$20.75	0.81%	\$0.26	1.3%	0.010%		23.5%	Yes		
096	MO-0115428	JCPSD, Lower Big River WWTF	S	\$63,698	777	\$776	\$42.19	\$42.27	0.80%	\$0.08	0.2%	0.002%		10.9%	Yes		
097	MO-0095567	Steelville WWTP	S	\$30,551	851	\$1,524	\$19.75	\$19.90	0.78%	\$0.15	0.8%	0.006%		29.7%	Yes		
098	MO-0040177	Sheldon WWTF	UL	\$38,239	198	\$8,338	\$17.60	\$24.51	0.77%	\$6.91	39.3%	0.217%		25.5%	Yes		
099	MO-0026387	Odessa Southeast WWTP	S	\$52,508	2,116	\$1,876	\$32.75	\$32.82	0.75%	\$0.07	0.2%	0.002%		11.7%	Yes		
100	MO-0022845	New Madrid WWTP	S	\$34,946	1,400	\$388.00	\$21.09	\$21.11	0.72%	\$0.02	0.1%	0.001%		29.2%	Yes		
101	MO-0080632	Festus- Crystal City WWTP	S	\$42,955	7,939	\$550.00	\$24.33	\$24.34	0.68%	\$0.01	0.0%	0.000%		12.5%	Yes		
102	MO-0026662	De Soto WWTP	S	\$35,802	2,800	\$792	\$19.29	\$19.31	0.65%	\$0.02	0.1%	0.001%		22.8%	Yes		
103	MO-0088854	Selma Village Lagoon	S	\$45,635	247	\$388	\$23.35	\$23.48	0.62%	\$0.13	0.6%	0.003%		18.9%	Yes		
104	MO-0102318	Clever WWTF	S	\$50,010	1,063	\$1,800	\$24.26	\$24.40	0.59%	\$0.14	0.6%	0.003%		15.5%	Yes		
105	MO-0112704	City of Lathrop Lagoon	UD	\$54,604	926	\$43,244	\$22.00	\$24.70	0.54%	\$2.70	12.3%	0.059%		11.8%	Yes		
106	MO-0096610	West Plains WWTF	S	\$33,184	6,103	\$2,030	\$14.91	\$14.94	0.54%	\$0.03	0.2%	0.001%		27.7%	Yes		
107	MO-0028789	Centralia WWTF	UD	\$40,455	2,390	\$59,057	\$10.55	\$14.16	0.42%	\$3.61	34.2%	0.107%		18.4%	Yes		
108	MO-0036200	Marston WWTF	S	\$27,624	235	\$212	\$9.36	\$9.44	0.41%	\$0.08	0.8%	0.003%		28.5%	Yes		
109	MO-0022926	Corder North WWTF	UD	\$40,235	192	\$2,509	\$4.00	\$9.07	0.27%	\$5.07	126.8%	0.151%	*18	22.8%	Yes		
110	MO-0022934	Corder South Lagoon	UD	\$40,235	192	\$2,509	\$4.00	\$9.07	0.27%	\$5.07	126.8%	0.151%	*18	22.8%	Yes		
111	MO-0100374	JCPSD, House Springs Senior & Early Childhood Center WWTF	S	*12	1	\$228	*12	*12	*12	*12	*12	*12		*12	Yes		

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			House- holds at or Below Poverty	Affordability *8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
112	MO-0100668	JCPSD, Echo Valley Estates WWTF	S	*12	74	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
113	MO-0103233	JCPSD, Bear Creek Estates Mobile Home Park WWTF	S	*12	152	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
114	MO-0103438	JCPSD, Woodridge Estates WWTF	S	*12	58	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
115	MO-0105201	JCPSD, Pine Grove Manor Apartments WWTF	S	*12	20	\$114	*12	*12	*12	*12	*12	*12		*12	Yes
116	MO-0106909	JCPSD, Meadowbrook Estates WWTF	S	*12	35	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
117	MO-0108642	JCPSD, Sycamore Springs Mobile Home Park WWTF	S	*12	200	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
118	MO-0109304	JCPSD, Cedar Springs Elementary School WWTF	S	*12	1	\$114	*12	*12	*12	*12	*12	*12		*12	Yes
119	MO-0124788	JCPSD, Miller Crossing WWTF	S	*12	39	\$228	*12	*12	*12	*12	*12	*12		*12	Yes
120	MO-0126926	JCPSD, Fisher Road WWTF	S	*12	191	\$684	*12	*12	*12	*12	*12	*12		*12	Yes



**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. *4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User				Households at or Below Poverty	Affordability *8
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
121	MO-0131024	JCPSD, Yorktown WWTF	S	*12	136	\$1,072	*12	*12	*12	*12	*12	*12		*12	Yes
122	MO-0136468	JCPSD, Otto Express Mart WWTF	UL	*12	7	*12	*12	*12	*12	*12	*12	*12		*12	Yes
123	MO-0081345	Southwest Livingston County R-I School District WWTP	UL	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
124	MO-0083241	Northeast Vernon County R-I Elementary School WWTF	UL	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
125	MO-0085618	Ripley County R-IV School WWTF	UL	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
126	MO-0087921	Kingston K-14 School District WWTF	S	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
127	MO-0090697	Sherwood Cass R-VIII School Lagoon	UD	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
128	MO-0098957	Perryville Regional Airport WWTP	S	*13	*13	\$424.00	*13	*13	*13	*13	*13	*13		*13	Yes
129	MO-0107808	Hudson R-9 School District WWTF	UL	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

No. #4	Permit No.	Facility Name *5	Pollution Control Option *6	Annual MHI *7	Number of Service Users	Annualized Additional Cost	Current Monthly Sewer Rate Per User	Projected Monthly Sewer Rate Per User		Increase of Monthly Sewer Rate Per User			Households at or Below Poverty	Affordability*8	
							\$	\$	% of Monthly MHI *7	\$	%	% of Monthly MHI *7			
*9, *10				[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]			
130	MO-0117455	Willard Central Elementary WWTP	UL	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
131	MO-0121151	Warsaw R-9 South Elementary WWTP	UD	*13	*13	*13	*13	*13	*13	*13	*13	*13		*13	Yes
132	MO-0126535	South Fork Elementary WWTF	S	*13	*13	\$116	*13	*13	*13	*13	*13	*13		*13	Yes
133	MO-0136361	Ruth Mercer Elementary WWTP	S	*13	*13	\$276	*13	*13	*13	*13	*13	*13		*13	Yes
134	MO-0136409	Anaconda School Sewage Treatment Plant	S	*13	*13	\$228	*13	*13	*13	*13	*13	*13		*13	Yes
135	MO-0034509	MDNR, Dr. Edmund A. Babler Memorial State Park WWTF	S	*14	*14	\$26	*14	*14	*14	*14	*14	*14		*14	Yes
136	MO-0086291	Exeter WWTF	S	*15	*15	*15	*15	*15	*15	*15	*15	*15		*15	Yes

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

<i>Notes</i>	
*1	Average increase of monthly sewer rate per user = “sum of increase of monthly sewer rate per user” / “109 available data points”
*2	Average increase of monthly sewer rate as a % = “sum of increase of monthly sewer rate as a %” / “109 available data points”
*3	Average increase of monthly sewer rate as a % of monthly MHI = “sum of increase of monthly sewer rate as a % of monthly MHI” / “110 available data points”
*4	This table is arranged in descending order of projected monthly sewer rate per user as a percentage of monthly MHI of the respective community.
*5	Abbreviations used in the facility names include the following: BCRSD: Boone County Regional Sewer District CGCRCSO: Cape Girardeau County Reorganized Common Sewer District CID: Community Improvement District FCPWSO: Franklin County Public Water Supply District JCPSD: Jefferson County Public Sewer District MDNR: Missouri Department of Natural Resources PWSO: Public Water Supply District WWTF: Wastewater Treatment Facility WWTP: Wastewater Treatment Plant
*6	Abbreviations used in the pollution control options include the following: S: sampling only UC: upgrade (collection system) UD: upgrade (disinfection only) UL: upgrade (land application) UM: upgrade (mechanical plant)
*7	MHI: median household income.
*8	Yes: affordable; No: not affordable; Mandate: federal mandate regardless of affordability.
*9	For pollution control option as “sampling only:” [3]= “sum of ‘sampling cost per sample x annual sampling frequency’ for all sampling parameters” [5]=[4]+[7] [6]=[5]/([1]/12) [7]=[3]/12/[2] [8]=[7]/[4] [9]=[7]/([1]/12)



**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

**Notes (Cont.)**

- \*10 For pollution control option other than “sampling only:”  
 $[3] = ([7] - [4]) * [2]$   
 [5a] projected monthly sewer rate for addition of disinfection treatment to current facility  
 = “current monthly user rate” + “new monthly user cost”  
 = “current monthly user rate” + “(annualized capital costs + annual operation and maintenance costs [ + annual sampling costs])/12/ number of users”  
 [5b] projected monthly sewer rate for replacement of current facility with mechanical plant or land application  
 = “amount of the current annual user rate used towards debt services payment” + “new monthly user cost”  
 = “amount of the current annual user rate used towards debt services payment” + “(annualized capital costs + annual operation and maintenance costs - current annual user rate [ + annual sampling costs])/12/ number of users”  
 $[6] = [5] / ([1] / 12)$   
 $[7] = [5] - [4]$   
 $[8] = [7] / [4]$   
 $[9] = [7] / ([1] / 12)$
- \*11 Data not available. Permittees did not provide their current user rates, although the Department had made attempts to obtain the information.
- \*12 Not applicable. Different sewer districts use specific rate structures and they are generally considered as sufficient to comply with the permits.
- \*13 Not applicable. Schools, churches, nursing homes, airports, ports, training centers, correctional centers and other institutional facilities do not finance the upgrade, operation, or maintenance of their wastewater treatment facilities based on residential sewer rates.
- \*14 Not applicable. Federal-owned, state-owned, and local government-owned systems do not finance the upgrade, operation, or maintenance of their wastewater treatment facilities based on residential sewer rates.
- \*15 The projected user rates were lower than the current sewer rates; therefore, the current sewer rates were used to assess residential impacts, since it is unlikely the user rates would decrease after upgrading the facilities.

**Table 1. Key Data Utilized or Generated in the Affordability Findings Issued During 2018 (Cont.)**

*Notes (Cont.)*

- \*16 Projected Monthly User Rate as a percentage of the Monthly Median Household Income exceeds 2%. An affordability threshold for Projected Monthly User Rate as a percentage of the Monthly Median Household Income varies depending on the situation of each individual community. The cost analyses associated with these permits have resulted in findings that the Projected Monthly User Rates will likely be affordable. If additional information is provided in the future that indicate the Projected Monthly User Rates are unaffordable, the Department will modify the analyses and permits accordingly and grant extensions to schedules of compliance to mitigate the impacts on the residents.

*Berger WWTF (MO-0134732, No. 001 in Table 1)*

See page 1 for this permit action summary.

*Bosworth WWTF (MO-0135607, No. 007 in Table 1)*

See page 1 for this permit action summary.

*Clarence WWTF (MO-0041076, No. 005 in Table 1)*

See page 2 for this permit action summary.

*Downing WWTF (MO-0109240, No. 006 in Table 1)*

See page 2 for this permit action summary.

*Wheeling WWTF (MO-0097608, No. 003 in Table 1)*

See page 3 for this permit action summary.

- \*17 *Pickering WWTF (MO-0130133, No. 058 in Table 1)*

The City of Pickering's permit action required compliance with effluent limitations for ammonia. The city is currently charging a rate of \$21 per 1,000 gallons per user per month of which \$9.35 is used toward payment on their current outstanding debt. The current rate per 5,000 gallons per month is approximately 3.46% of the community's MHI. The affordability finding projected a monthly user rate of \$43.29 for land application, which equates to 1.43% MHI; thus a reduction of 2.03% MHI. Additionally, the city's current wastewater treatment technology is capable of meeting the proposed effluent limitations for ammonia. As a result, it is likely that a complete replacement of the existing facility will not be needed and that compliance with final effluent limitations may be achieved through changes in operational control activities and/or supplemental treatment components such as additional aeration.

- \*18 Facilities with a projected increase of Monthly Sewer Rate per user as a percentage is 100% or greater. In all cases, the Department is working with the permittees to secure grants and low-interest loans wherever possible.

*Risco WWTF (MO-0025852, No. 053 in Table 1)*

See page 2 for this permit action summary.

*Rockville WWTF (MO-0103748, No. 060 in Table 1)*

See page 3 for this permit action summary.

*Marion County PWSD #1 (MO-0109622, No. 070 in Table 1)*

See page 3 for this permit action summary.

*Houstonia Lagoon (MO-0058475, No. 083 in Table 1)*

See page 3 for this permit action summary.

*Corder North and South WWTF (MO-002926 and MO-0022934, No. 109 and 110 in Table 1)*

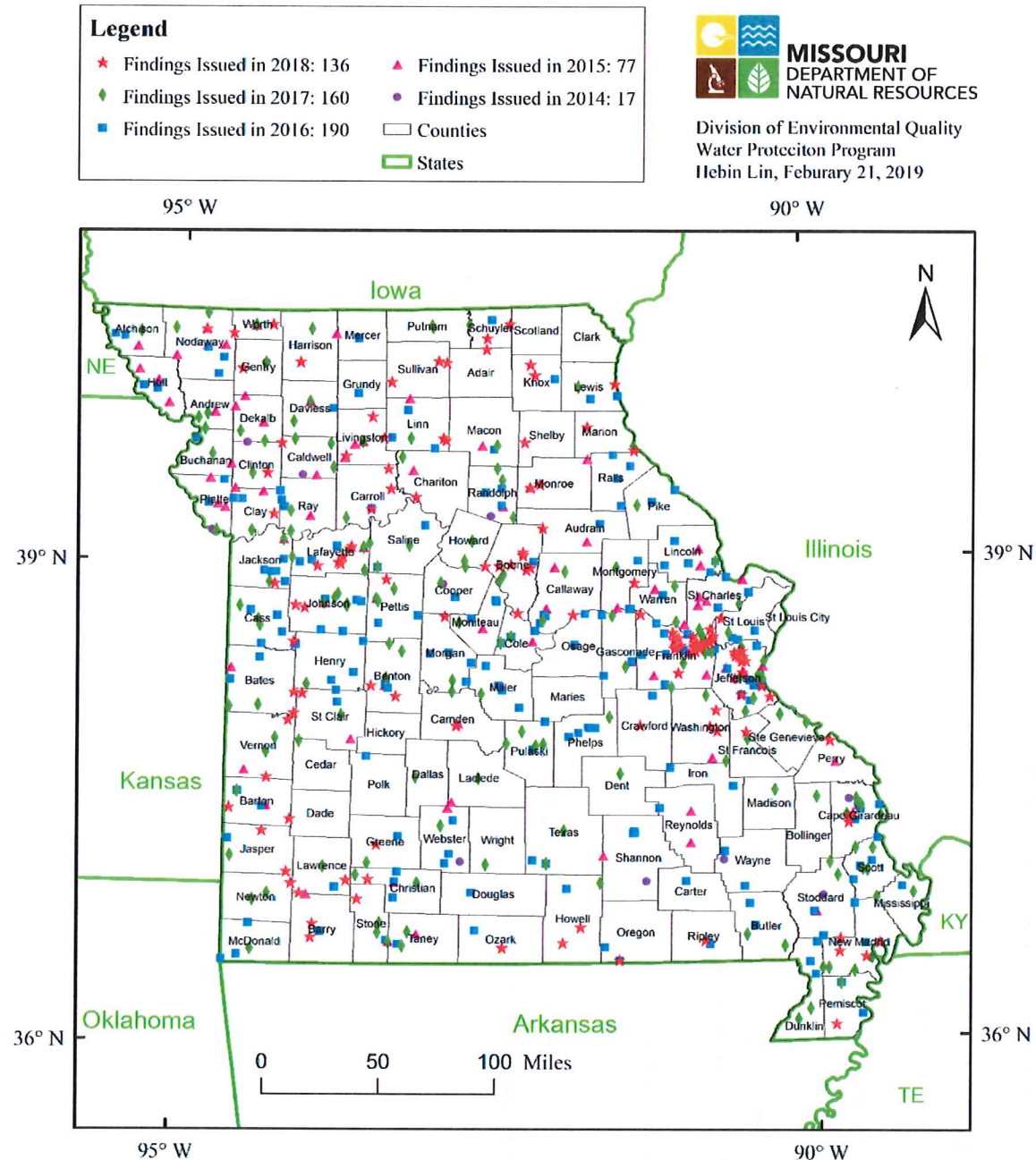
See page 3 for this permit action summary.



## 2. Geographical Distribution: 2014-2018

The locations of the wastewater treatment facilities for which affordability findings have been conducted during calendar years 2014 through 2018 respectively are illustrated in Map 1 below.

### 2018 Annual Report on Affordability Findings (RSMo 644.145)



Although the data in this data set have been compiled by the Missouri Department of Natural Resources, no warranty, expressed or implied, is made by the Department as to the accuracy of the data and related materials. The act of distribution shall not constitute any such warranty, and no responsibility is assumed by the Department in the use of these data or related materials.

**Map 1. Locations of the Wastewater Treatment Facilities with Affordability Findings Issued in 2014 through 2018**

### **3. Conclusion**

Based on the information and data collected, derived and examined, all the affordability findings issued by the Missouri Department of Natural Resources during calendar year 2018 met the criteria of affordable.

This report was prepared by the Operating Permits Section, Water Protection Program, Missouri Department of Natural Resources.

### **Appendix A. Subsections 644.145.4 and 644.145.9 of the Revised Statutes of Missouri**

#### **Revised Statutes of Missouri Chapter 644 Water Pollution**

644.145.4. The Department of Natural Resources shall adopt procedures by which it will make affordability findings that evaluate the affordability of permit requirements and enforcement actions described in subsection 1 of this section, and may begin implementing such procedures prior to promulgating implementing regulations. The commission shall have the authority to promulgate rules to implement this section pursuant to chapters 536 and 644, and shall promulgate such rules as soon as practicable. Affordability findings shall be based upon reasonably verifiable data and shall include an assessment of affordability with respect to persons or entities affected. The Department shall offer the permittee an opportunity to review a draft affordability finding, and the permittee may suggest changes and provide additional supporting information, subject to subsection 6 of this section. The finding shall be based upon the following criteria:

- (1) A community's financial capability and ability to raise or secure necessary funding;
- (2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;
- (3) An evaluation of the overall costs and environmental benefits of the control technologies;
- (4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates;
- (5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low- and fixed-income populations. This requirement includes but is not limited to:
  - (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations; and
  - (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained;
- (6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;
- (7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards; and
- (8) An assessment of any other relevant local community economic condition.



644.145.9. The Department shall file an annual report by the beginning of the fiscal year with the governor, the speaker of the house of representatives, the president pro tempore of the senate, and the chairs of the committees in both houses having primary jurisdiction over natural resource issues showing at least the following information on the findings of affordability completed in the previous calendar year:

- (1) The total number of findings of affordability issued by the Department, those categorized as affordable, those categorized as not meeting the definition of affordable, and those implemented as a federal mandate regardless of affordability;
- (2) The average increase in sewer rates both in dollars and percentage for all findings found to be affordable;
- (3) The average increase in sewer rates as a percentage of median house income in the communities for those findings determined to be affordable and a separate calculation of average increases in sewer rates for those found not to meet the definition of affordable;
- (4) A list of all the permit holders receiving findings, and for each permittee the following data taken from the finding of affordability shall be listed:
  - (a) Current and projected monthly residential sewer rates in dollars;
  - (b) Projected monthly residential sewer rates as a percentage of median household income;
  - (c) Percentage of households at or below the state poverty rate.

#### **Appendix B. Overall Procedure for Making Affordability Findings**

The Department conducts an affordability finding, or a Cost Analysis for Compliance (CAFCom), as part of the renewal process for a National Pollutant Discharge and Elimination System (NPDES) permit, utilizing the following four primary tools and data sources:

- (1) A Financial Questionnaire with a Community Supplemental Survey sent to permit holders categorized as a Publicly Owned Treatment Works (POTW) for collecting information on the sustainability and financial capability of the community; examples of information requested are the “current monthly residential sewer rates”, and a primary socioeconomic indicator (Table 1), and “property tax collection rate in the municipality”, a secondary socioeconomic indicator;
- (2) The Affordability PreScreening Tool developed by the Department for compiling and analyzing socioeconomic data available from national, regional and local databases, including statistics from the U.S. Census Bureau; an example of data being “monthly median household income” (Table 1) and “percentage of households at or below poverty” (Table 1);
- (3) A CAPDEWORKS Model developed by Hydromantis Environmental Software Solutions, Inc. for estimating the capital costs and operating and maintenance costs for different wastewater treatment technologies for compliance of upgrades so as to calculate the “projected monthly residential sewer rate” (Table 1);
- (4) The Missouri Rural Population Sustainability Assessment Tool developed by the Environmental Finance Center at Wichita State University for assessing the potential of growth and sustainability of each rural community.

Once the draft NPDES permit is completed, the permit holder is given the opportunity to review and comment on the draft permit and the CAFCom during the 10 day preview and 30 day public notice period. These review and comment periods offer permit holders an opportunity to provide additional information in regard to their community’s unique financial situations before the final NPDES permit is issued. When the NPDES permit contains a Schedule of Compliance, during the 10 day preview, Department staff contact the permit holder via phone calls to ensure the permit holder has received and understood the draft permit and the CAFCom.